AUTOMATIC GAIN CONTROL OF MULTI-PLE ANTENNA OFDM RECEIVER

Abstract

Amethod includesamplifying the plurality of received signals, generating a plurality of time domain samples of the amplified signals with at least an analog-to-digital converter (ADC), determining at least a candidate power according to root-mean-square (RMS) powers of a first group of symbols received at the receiver antennas, and setting the gain of the amplifier according to a selected candidate power with the processor. The received RMS power for one antenna is determined as the square root of the averaged product of each received symbol and its complex conjugate for all symbols of the first group. The candidate power can be determined considering a subgroup of antennas using an RMS value, anarithmetical mean value, or a geometric mean value of this subgroup.